

decreasing agent. It accelerates the respiration, and, with large doses, causes a slight acceleration of the pulse. In moderate doses it is a stimulant, in large ones a depressant, to the nervous system.

As regards its action on the temperature, alcohol in very large doses causes a considerable reduction ; in small doses, exceeding twelve grains, the reduction is only some tenths of a degree Centigrade, this temporary effect being in no measure influenced by digestion. In very small doses, between six and eleven grains, M. Dumouly obtained a rise of two- or three-tenths of a degree. Below six grains there was no appreciable effect. Curiously enough, the dose of twelve grains seemed to be intermediate, and gave rise to no effect whatever.

In point of view of pathology and therapeutics, alcohol acts in pyrexias as a stimulant ; it is a powerful remedy against delirium and adynamia. Large doses (thirty grains of pure alcohol) produce in fever cases a slight refrigeration of a few tenths of a degree. This effect is transitory ; its maximum occurs in an hour and a half, and it is completely over in three hours. Divided doses do not have this temporary effect. The action of alcohol on the pulse is very slight. Large doses fail to produce intoxication in the febrile patient, while they surely have this effect on the healthy individual.

*En résumé*, if alcohol has any effect in fever, it is not as an antipyretic, as is generally thought to be the case.

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NERVE-STRETCHING.—M. Quinquaud reported to the Société de Biologie, Mar. 12th (abstract in *Gaz. des Hôpitaux*, No. 32), that he had observed a certain number of facts that indicated that the therapeutic effects sought for can only be obtained when there is produced a complete anaesthesia of the whole limb supplied by the nerve ; that it succeeds only when this anaesthesia is persistent, and, finally, that the principal indication for nerve-stretching is neuralgia.

Next, taking up the subject histologically, he asked what was the process taking place in the elongated nerves ? There is, first, according to him, a dynamic action ; an irritation of the nerve itself or of the cord.

When the anaesthesia obtained is only temporary there is no lesion of the stretched nerve. When it is persistent there is a secondary degeneration of the nerve. This is an incontestable

fact, that when a nerve is sufficiently stretched it becomes the seat of a secondary degeneration.

At the same meeting M. Laborde presented a memoir of M. Marcus on the subject. The author had studied the anatomical modifications in the stretched nerve. When a nerve, stretched during life, is submitted to the action of osmic acid, it is seen that the cylinder axis is separated from the myeline by a yellowish substance, and the usual signs of nerve degeneration are observed. In the cat, especially, M. Marcus found the exact place in the nerve where stretching had been applied eight days after the operation. The lesions always existed in the central portion of the nerve. The effects obtained are quite different according as the traction is made on the central or the peripheral portion of the nerve. In the former case we only abolish sensibility, motility remaining intact, while in the latter case both are destroyed.

In reply to questions, M. Laborde stated that while the lesions of the central portion were very slightly marked, it was not astonishing that the peripheral portion remained intact; and that as regards the persistence of motor power with the degenerative changes observed, it could be explained by the fact that, in a stretched mixed nerve, the sensory roots would be affected while the motor ones would remain intact. It is certain that the elements of compression of the nerve must also be considered, and the phenomena showed relations with those obtained by MM. Bastian and Vulpian by compressing the nerves.

At the session of the Soc. de Biologie, Apr. 22d (reported in *Gaz. des Hôpitaux*), M. Quinquaud reported that in his observation he had found that a spinal epilepsy, analogous to that following section of the cord or the sciatic nerve, might result from simple nerve-stretching. In his experiments he produced epilepsy by irritating or pinching the epileptogenic zone of Brown-Séguard on the same side as that of the stretching, sometimes on the opposite side. If the stretching was done on the right or left side the spinal epilepsy followed irritation of this zone on the right or left side; but irritation of the right side only produced epilepsy of the right side; it was needful to apply the irritation anew to the left side to cause the convulsions on that side; it reached its maximum in the posterior member of the same side, rarely in that of the opposite side.

This spinal epilepsy is not constant, and its course is yet obscure; nevertheless, it is rational to admit that nerve-stretching acts powerfully upon the spinal cord, of which we have further proofs in the following facts :

The stretching of a nerve may cause functional disorders in the corresponding nerve of the opposite side ; these are sometimes phenomena of arrest, sometimes those of dynamic hyperexcitability. Thus, if the right sciatic be stretched, anæsthesia is produced not only in the sphere of the right nerve, but also in that of the left crural, and sometimes in the region innervated by the right crural or the left sciatic. When the stretching has been sufficient, the anæsthesia is persistent in the last two toes innervated by the elongated right sciatic, while the anæsthesia produced in distinct parts is transitory.

The same effects may occur in the nerves of the anterior limbs. They may be observed also in the fore limbs after stretching the nerves of the posterior ones ; the modifying influence on the cord, therefore, traverses a certain distance in that organ.

Moreover, even insufficient stretching causes, first, an anæsthesia, the duration and intensity of which are proportional to the amount of stretching ; if the latter is slight the anæsthesia will soon disappear, if it is moderate the duration will be longer, and if it is forcible the anæsthesia will be persistent, as has been shown by M. Laborde.

In cases where the anæsthesia is of only short duration, it is not uncommon to see produced a hyperæsthesia, either direct or in the region of a distant nerve.

Moreover, after the operation, there always exists a certain degree of paresis ; the posterior member, for example, drags as if the cord had been divided, thanks to the crural nerve, which innervates a larger part of the muscles of the hind limb.

Finally, when, after having caused an experimental neuritis or even a perineuritis, we stretch the nerve, we produce anæsthesia ; but this quickly disappears, so that in these conditions a much more forcible elongation of the nerve is required to produce a lasting anæsthesia than is the case with a healthy nerve.

M. Quinquaud has likewise observed various trophic disorders following this operation. All these facts have their clinical bearings, which he will dilate upon in a future communication.

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The following are the titles of some of the recently published papers on the therapeutics of the nervous system and mind :

KANE, H. H.: Chloral hydrate, part iii, continued, *N. Y. Med. Record*, March 19th. BLACKWOOD, W. R. D. : On the treatment of neuralgia by static electricity, *Med. & Surg. Reporter*, March